

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 11274568
PUBLICATION DATE : 08-10-99

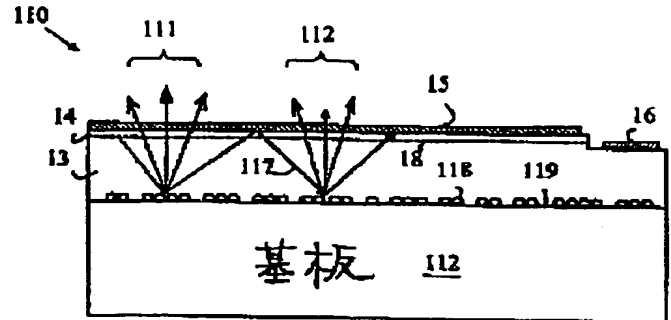
APPLICATION DATE : 02-02-99
APPLICATION NUMBER : 11024950

APPLICANT : HEWLETT PACKARD CO <HP>;

INVENTOR : STEVEN D LESTER;

INT.CL. : H01L 33/00

TITLE : LED AND LED-ASSEMBLING METHOD



ABSTRACT : PROBLEM TO BE SOLVED: To efficiently improve the external coupling effect of the light emitted by an LED.

SOLUTION: A first layer 13 of a semiconductor material deposited on a substrate 112, a second layer 14 of the said semiconductor material forming a p-n diode together with the first layer, a light emitting region 18 located between the first and second layers for emitting light, a first electrode 15 deposited on the second layer, and a second electrode 16 electrically connected to the first layer are included. Projecting parts 118 and/or recessed parts 119 for scattering or diffracting the light are provided on the upper surface of the substrate 112. Roughening of the upper surface of the second layer may also be used.

COPYRIGHT: (C)1999,JPO